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APPLICATION FOR LETTERS PATENT

for

**BOTTLE CARRIER DEVICE**

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## **BOTTLE CARRIER DEVICE**

### **BACKGROUND OF THE INVENTION**

**[0001]** Field of the Invention: This invention relates to devices for carrying bottles, such as water bottles or pop bottles, and specifically relates to bottle carrier devices which are structured for easy attachment and detachment from a support to which the bottle carrier has been temporarily secured.

**[0002]** Description of Related Art: Plastic beverage bottles having a fluid capacity of between six ounces and twenty ounces have been developed within the last decade in response to an increase in the active daily lives of people. Such beverage bottles, which are used for both soda pop and water, have been developed to allow people to transport beverages in a container which is lightweight, unbreakable and easily disposable. In further response to the portability of such bottles, there has been the related development of means for carrying bottles of water or soda pop in close proximity to a person.

**[0003]** Thus, for example, a number of structures have been developed over the years for attaching water bottles to bicycles so that the rider can have easy access to the bottle while riding. Such devices typically comprise a carrier which is made of sturdy metal or plastic formed into a cylindrical structure which is sized to receive the bottom portion of a bottle and an attachment means for securing the carrier to the frame of the bicycle. The rider is then able to remove the bottle from the carrier, take a drink and replace the bottle in the carrier while not interrupting his ride.

**[0004]** Other devices have been developed for carrying a bottle on a person's body

or, for example, in a backpack or other bag. Such devices mimic those devices developed for carrying a bottle on a bicycle in that they comprise a cylindrical, pocket-like structure which is sized to receive and encircle at least the bottom portion of a bottle to maintain the bottle therein. Such devices may be made of either hardened materials, such as metal or plastic, or may be made of flexible material, such as cloth or flexible plastic. Other carrying devices have been developed for larger bottles, namely quart or half gallon milk bottles, comprising a ring which encircles the neck of the bottle and an attached handle for grasping and carrying the bottle.

**[0005]** Known bottle-carrying devices are useful for carrying bottles, but have not been effectively designed to address the portability needs of active people. Thus, it would be advantageous in the art to provide a bottle carrier device which is structured to be easily attached to a bottle and easily attachable to a person's clothing or other support in a manner which makes the bottle easily accessible and usable.

## BRIEF SUMMARY OF THE INVENTION

**[0006]** In accordance with the present invention, a bottle carrier device is provided which is structured to be easily attached to a bottle and easily attached to a supporting structure in a manner which allows a person to detach and access the bottle and then replace the bottle in its carried attachment, often using only a single hand.

**[0007]** The bottle carrier of the present invention comprises a bottle-engaging member which is generally sized to fit about the neck of any plastic bottle, including liter-sized bottles. The bottle-engaging member may preferably be an elastomeric ring

which is positionable about the neck of a bottle. The bottle carrier device also includes a hook member connected to the elastomeric ring which enables the bottle carrier to be easily attached to a supporting member, such as a belt loop or strap of a backpack. The hook member is preferably structured to enable the bottle carrier to be easily attached and detached from a supporting member with a single hand. A joining member connects the hook member to the bottle-engaging member.

**[0008]** In an alternative embodiment of the invention, the bottle carrier device may further include an intermediate connector member associated as part of the joining member and positioned between the hook member and the bottle-engaging member to enable the user to detach the bottle-engaging member portion of the bottle carrier device from the hook member, while leaving the hook member engaged with the supporting member to which it is attached. Again, the intermediate connector member is preferably structured to be detachable with a single hand.

#### BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

**[0009]** In the drawings, which illustrate what is currently considered to be the best mode for carrying out the invention:

**[0010]** FIG. 1 is a view in elevation of a first embodiment of the bottle carrier device;

**[0011]** FIG. 2 is a perspective view of the device shown in FIG. 1 as attached to the neck of a plastic bottle; and

**[0012]** FIG. 3 is a view in elevation of a second embodiment of the bottle carrier device having an intermediate connector member.

## DETAILED DESCRIPTION OF THE INVENTION

**[0013]** FIG. 1 illustrates the general construction of the bottle carrier device 10 of the present invention. The bottle carrier device 10 comprises a hook member 12 and a bottle-engaging member 14 which are secured together by a joining member 16. The hook member 12 may be any device or apparatus which is structured to be detachably attachable to a supporting member, such as a belt loop, pursue strap, etc. Preferably, the hook member 12 is structured and configured to enable attachment and detachment of the hook member 12 from a supporting member using a single hand, although single-handed manipulation of the hook member 12 is not required by the invention.

**[0014]** An exemplary hook member 12 that may be used in the bottle carrier device 10 is illustrated in FIG. 1 as a carabiner 20. Carabiners are well-known devices used in the sport of mountain climbing. They are generally characterized as comprising a loop member 22 having one end 24 which is larger or wider than the other end 26. They are also structured with a spring-biased gate pin 28 which is connected by a pivot pin 30 to a free end 32 of the loop member 22. As shown in phantom line, the gate pin 28 can be pivotally swung toward the interior 34 of the loop member 22, thereby exposing the other free end 36 of the loop member 22 and providing an opening to the interior 34 of the loop member 22. Items such as ropes or the like can be inserted onto the free end 36 of the carabiner 20. Because the gate pin 28 is spring-biased, it will immediately close back against the free end 36 of the loop member 22 to form a closed loop. Carabiners are specifically designed to enable the user to pivot the gate pin 28 to an

open position (shown in phantom line) using one hand. While a carabiner is particularly useful in the present invention, any device having the required characteristics may be suitable for use as the hook member in the present invention.

**[0015]** The bottle carrier device 10 of the present invention further includes a bottle-engaging member 14 which is structured to fit about the neck of a plastic bottle. A preferred bottle-engaging member 14, as illustrated in FIG. 1, is an elastomeric ring 40, such as an O-ring. The elastomeric ring 40 is sized with an internal diameter (i.d.) which is approximately equal in dimension to the outer diameter (o.d.) of the neck of a plastic bottle. Hence, the i.d. of the elastomeric ring 40 may be from about 20 mm to about 26 mm, with a particularly suitable i.d. of about 22 mm to 24 mm. The elastomeric ring 40 is preferably made of a material which is sufficiently elastic to enable the ring 40 to be stretched slightly to fit over the cap and/or neck of a bottle. However, the modulus of elasticity of the elastomeric ring 40 is preferably low so that the ring 40 does not stretch appreciably under the weight of a plastic bottle that is full of liquid.

**[0016]** The bottle-engaging member 14 is connected to the hook member 12 by a joining member 16 which may be any suitable device that securely connects the hook member 12 to the bottle-engaging member 14. By way of example only, FIG. 1 illustrates the joining member 16 as a length of material 42 which is folded upon itself and stitched, at line 44, to provide a first loop 46 which encircles a portion of the hook member 12 and a second loop 48 which encircles a portion of the bottle-engaging member 14.

**[0017]** The attachment of the of the bottle carrier device 10 for carrying is illustrated in FIG. 2. It can be seen that the elastomeric ring 40 has been positioned about the neck 50 of a bottle 52. The elastomeric ring 40 is placed about the neck 50 of the bottle 52 by positioning the elastomeric ring 40 over the cap 54 of the bottle 52 and forcing the elastomeric ring 40 down until the ring 40 is positioned to encircle the neck 50 as shown. The hook member 12, or carabiner 20, has been attached to a belt loop 56 of an article of clothing 58, such as trousers, by rotating the gate pin 28 to the open position and feeding the free end 36 of the carabiner 20 through the belt loop 56.

**[0018]** In use, the user attaches the hook member 12 to an article of clothing or accessory (e.g., strap of a backpack) as previously described, which provides a support for attachment of the present invention thereto. The bottle 52 is free to hang at the user's side and may be carried hands-free on the person's clothing or other belongings.

When the user wishes to access the fluid in the bottle 50, the user merely needs to cradle the carabiner 20 in the palm of one hand while using the fingers or butt of that hand to pivot the gate pin 28 out of engagement with the free end 36 of the carabiner 20. Once opened, the carabiner 20 may be removed from the belt loop 56, the liquid poured through the cap 54 of the bottle 52, and the carabiner 20 then reopened to position the carabiner 20 back on the belt loop 56.

**[0019]** FIG. 3 illustrates a second embodiment of the invention where hook member 12 is detachably attached to the bottle-engaging member 14 by means of an intermediate connector 60. The intermediate connector 60 may be any device or apparatus which allows the hook member 12 to be selectively detached from the bottle-

engaging member 14 to leave the hook member 12 attached to a supporting member (e.g., belt loop or purse strap) while providing access to the bottle (not shown) to which the bottle-engaging member 14 is attached.

**[0020]** By way of example only, the intermediate connector 60 in FIG. 3 is a detachable clip 64 comprising a male member 66 and a female member 68. The female member 68 comprises a three-dimensional housing 70 connected to the hook member 12 by a loop of material 72 which encircles a portion of the hook member 12. The housing 70 is formed with an opening 74 which is sized to receive a portion of the male member 66. The male member 66 of the intermediate connector 60 is structured with a pair of flexible prongs 76 which can be moved toward each other (in the direction of the arrows shown) to enable insertion of the prongs 76 into the opening 74 of the female member 68. The prongs 76 are each structured with an outwardly oriented shoulder 78 which, when the prongs 76 are inserted into the housing 70 of the female member 68, engage a ledge 80 of the housing 70, as shown in phantom. The prongs 78 are thereby held in position within the housing 70 of the female member 68. The male member 66 is attached to the bottle-engaging member 14 by a strap 84 of material which encircles a portion of the elastomeric ring 40 of the bottle-engaging member 14.

**[0021]** In use, the user attaches the hook member 12 to a supporting member, such as a belt loop or the like, as previously described, and the elastomeric ring 40 is positioned about the neck of a bottle, as previously described. When the user wishes to access the liquid in the bottle, the user presses together the two prongs 76



positioned within the housing 70 of the female member 68 and exposed through the side cutouts 88 of the housing 70, which causes the prongs 76 to disengage from the ledges 80 of the housing 70 and slip from out of the opening 74 of the housing 70 as shown. The bottle-engaging member 14 is then freed from the hook member 12 and the bottle may be lifted to the mouth to drink. The bottle may then be returned to carrying position by pushing the prongs 76 together again to insert the prongs 76 into the housing 70 of the female member 68 as previously described.

**[0022]** The bottle carrier device of the present invention is structured to provide easy detachable attachment of a plastic bottle to a person's apparel or accessories for hands- free and lightweight portability. The bottle carrier device is also structured to provide easy access to the bottle by detachably attaching it to apparel or other articles. The bottle carrier device is adaptable to any size of bottle having a neck and it not merely limited to plastic bottles, or bottles of smaller size. Thus, it would be apparent to one of skill in the art that such adaptations can be made, and reference herein to details of the illustrated embodiments is made by way of example and is not meant to limit the scope of the invention, as defined by the claims.